

REMARKS

The Examiner is thanked for the careful examination of the application, and for the suggestions for amending the application. However, in view of the foregoing amendments and the remarks that follow, the Examiner is respectfully requested to reconsider the application and withdraw the outstanding rejections.

Disclosure:

The disclosure is objected to because of informalities on page 2 and 6. However, it appears that such informalities were corrected by the substitute sheets that were filed with the application when the application was filed with the U.S. Patent and Trademark Office on September 5, 2001. If the Examiner does not have copies of the substitute sheets, the Examiner is respectfully urged to telephone the undersigned attorney and such sheets will be supplied to the Examiner.

35 U.S.C. § 112, First Paragraph:

Claim 10 has been rejected under 35 U.S.C. § 112, first paragraph. It is alleged that the claim contained subject matter that is not described in the specification in such a way as to enable one skilled in the art to which it pertains to make and/or use the invention. In particular, the Examiner alleges that the disclosure does not explain how displacement is discriminated or how to "exclude" displacement. In response to this rejection, the Examiner's attention is directed to the amended paragraph on page 6 of the specification, wherein a typographical error has been corrected. The corrected text

explains that an assumption is made that the load displacement curve of the mattress base is a straight line. Accordingly, when a double differential to load displacement curve is effected, the linear portion of the resulting differential is excluded from the curve.

Accordingly, the linear portion of the load displacement curve resulting from the mattress base would be excluded. One skilled in the art would know how to carry out the double differential of the load displacement curve, as explained in the paragraph at the bottom of page 6, so that the effective displacement of the mattress base is automatically excluded. Since the load displacement curve of the mattress base is assumed to be a straight line, its gradient will remain constant and, therefore, a double differential will eliminate the straight line load displacement curve of the mattress base that is superimposed on the load displacement curve of the mattress.

Since a double differential plot is a plot of the rate of change of gradient, which for the mattress base will be zero, the mattress base effect will be removed. The use of a double differential of the load displacement curve is thus a simple way of excluding the effect of the displacement of the mattress base. This is the illustrated embodiment, and is easily understood and performed by one of ordinary skill in the art.

Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of claim 10 under 35 U.S.C. § 112, first paragraph.

35 U.S.C. § 112, Second Paragraph:

Claim 10 has been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for not identifying the discriminating and displacement portion of the claim. In response to that rejection, claim 10 has been amended to indicate the relationship between the discrimination and the displacement.

Accordingly, the Examiner is respectfully requested to reconsider and withdraw the outstanding rejection of claim 10.

Art Rejections:

Claims 1, 2, 4, 3, 5, 6 and 7 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,140,008, hereinafter Golembeck, in view of U.S. Patent No. 4,004,457, hereinafter Eide. Claim 10 has been rejected under 35 U.S.C. § 102(b) as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a), as obvious over Golembeck.

Claim 1 has now been amended to include the subject matter, which may also be found in claim 10, which more clearly defines the processing means as being configured to discriminate and exclude the displacement arising from deflection of the bed base from the displacement arising from deflection of the mattress to thereby identify the load/displacement relationship of the mattress. The amendments to claim 1 also indicate that the support surface is a mattress in situ on a bed base.

The Examiner acknowledges that Golembeck does not disclose a "processing means". However, the Examiner refers to the term "evaluation" in column 1 of

Golembeck, and argues that it would have been obvious to utilize a processing means to evaluate the recorded data because of such teaching.

Although Applicants dispute the conclusion reached by the Examiner, Applicants further point out that the processing means is more detailed than that suggested by the Examiner. Specifically, the processing means is configured to, among other things, discriminate and exclude displacement arising from the deflection of the bed base from the displacement arising from the deflection of the mattress, to thereby identify the load/displacement relationship of the mattress.

Specifically, the Examiner's attention is directed to the fact that the Golembeck system is intended to test a mattress 10 on a platform 12 that is integrally connected to the remainder of the testing system. Note that the platform 12 is connected to a bottom section 16 and a supporting frame 14. Thus, the Golembeck system is intended for use in a factory or commercial establishment wherein the mattress is placed on the platform 12 and tested by itself. In contrast to the Golembeck system, the apparatus of claim 1, as now amended, is an apparatus for assessing the condition of a mattress in situ on a bed base. For example, the apparatus is intended to attach to or slip under a bed base so that a mattress can be tested while the mattress is on the bed base. Such a configuration enables the testing system to be conveniently used in a hospital or hotel without having to remove the mattress from the bed base. If the Golembeck system were to be used in a hospital or hotel, the mattress would have to be removed from the bed base and placed on the platform 12 of Golembeck. Accordingly, Golembeck does not teach or suggest an apparatus for assessing the condition of a mattress in situ on a bed base.

Furthermore, in view of the fact that Golembeck is not designed for assessing the condition of a mattress in situ on a bed base, Golembeck does not include any type of processing means which is able to discriminate and exclude the displacement arising from the deflection of the bed base, as opposed to displacement arising from deflection of the mattress.

In view of the fact that the Golembeck testing device is not able to be used with a mattress in situ on a bed base, it cannot be said that Golembeck teaches or suggests a processing means that is configured to discriminate and exclude the displacement arising from deflection of the bed base from the displacement arising from deflection of the mattress.

Accordingly, claim 1 is clearly allowable over Golembeck. Eide is relied upon by the Examiner merely for its teaching of a manual drive handle. Accordingly, Eide does not overcome the deficiency of Golembeck with respect to amended claim 1.

Claims 2-8 depend from claim 1, and are thus also patentable over Golembeck in view of Eide for the reasons set forth above with respect to claim 1.

Claim 7 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Golembeck in view of Eide and further in view of Kent or Toulc'Hoat. The Examiner relies upon Toulc'Hoat or Kent to allegedly teach the use of wheels to provide for test surfaces to provide accurate hardness tests. However, Kent or Toulc'Hoat do not overcome the deficiency of the rejection of Golembeck with respect to claim 1.

Accordingly, claim 7 is also patentable over claim 1.

Furthermore, the teachings of Kent and Toulc'Hoat all relate to penetration hardness testers for testing for penetration hardness of surfaces that have no bearing whatsoever on the present invention. Specifically, those devices of the prior art penetrate and measure an extent of cutting penetration into a surface, from which use of a wheel roller as the cutter head facilitates the cutting action. The wheel or roller of the indenter of the testing apparatus of the present invention certainly is not penetrative, and is not measuring extent of penetration, but simply an extent of deflection of an object under test.

Claim 8 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Golembeck in view of Eide, and further in view of Aschinger. However, Aschinger is relied upon by the Examiner for its alleged teaching of a parallelogram. Accordingly, Aschinger does not otherwise overcome the deficiency of Golembeck. Accordingly, claim 8 is also patentable over the applied prior art.

With regard to claim 10, the amendments set forth above have been made with respect to the rejections under 35 U.S.C. § 112. However, it should also be clear that the method of claim 10, as now amended, is clearly not taught or suggested by Golembeck at least for the reasons as set forth above with respect to claim 1. Specifically, Golembeck does not teach or suggest constructing a load/displacement curve and discriminating and excluding the displacement arising from deflection of the bed base from the displacement arising from deflection of the mattress to thereby identify a load/displacement relationship with a mattress. Accordingly, claim 10 is also patentable over the applied prior art.

Claim 9 has been indicated as containing allowable subject matter, and has therefore been rewritten in independent form.

To further define the protection to which Applicants are entitled, new claims 11-13 have been added. New claim 11 defines an apparatus for assessing the condition of a mattress in situ on a bed base, wherein the apparatus includes means for pressing the indenter into the mattress, and wherein the indenter comprises a curved surface mounted on the frame. Both Golembeck and Eide teach a flat surface for pressing on the mattress, not a curved surface. Neither Eide nor Golembeck is able to provide anatomically relevant information. Each has only a flat plate of a large surface area to press into the mattress which, by no means, simulates the pressure points of a bed occupant on a mattress. The curvature of the surface of the indenter in claim 11 is, as discussed on page 5 of the specification, representative of the bony ischial protrusions of a user on a mattress, and gives a much better indication of whether the mattress user will risk bed sores, rather than a large flat indenter. Accordingly, claim 11 is clearly patentable over the cited prior art.

Claim 12 depends from claim 11, and thus is allowable at least for the reasons set forth above with respect to claim 11.

Claim 13 defines an apparatus for assessing the condition of a mattress in situ on a bed base, wherein the apparatus, among other elements, is mobile by virtue of having wheels, and is readily movable so that the base member extends beneath the bed base.

As discussed above, the apparatus of claim 13 is thus suitable for use in a hospital or a hotel. The prior art applied by the Examiner is more or less fixed, and not mobile, and is intended for use in a mattress factory. Accordingly, claim 13 is also not taught or suggested by the applied prior art.

In view of the foregoing amendments and remarks, the Examiner is respectfully requested to reconsider and withdraw the outstanding rejections of the application.

In the event that there are any questions concerning this response, or the application in general, the Examiner is respectfully urged to telephone the undersigned attorney so that prosecution of the application may be expedited.

Respectfully submitted,

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